

# Introduction to CareerTrac



National Institute of Environmental Health Sciences  
*Your Environment. Your Health.*

May 2019

# Contents

1. ***Introduction***
2. *Navigating CareerTrac*
3. *Generating Reports*
4. *Sample Outcome Statistics for NIEHS T32s*
5. *Logistics*

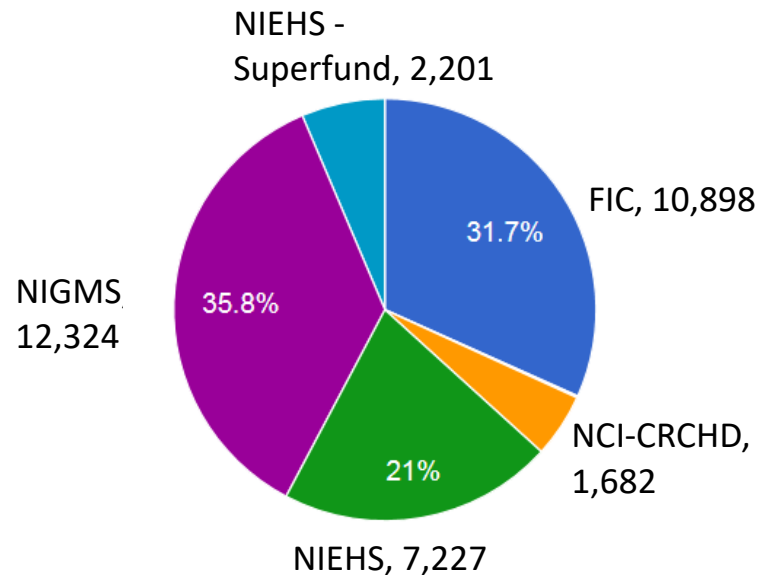


## What is CareerTrac?

- Searchable, structured and long term outcome data of trainees
- Leverage without duplication existing resources (xTRAIN, PubMed, etc.)
- Easy user interface for producing reports and program analysis reports – push button reports
- Role based access (PI and PD have different access)
- Partnership among 5 NIH “Tenants”
- Tenants have some ability to customize



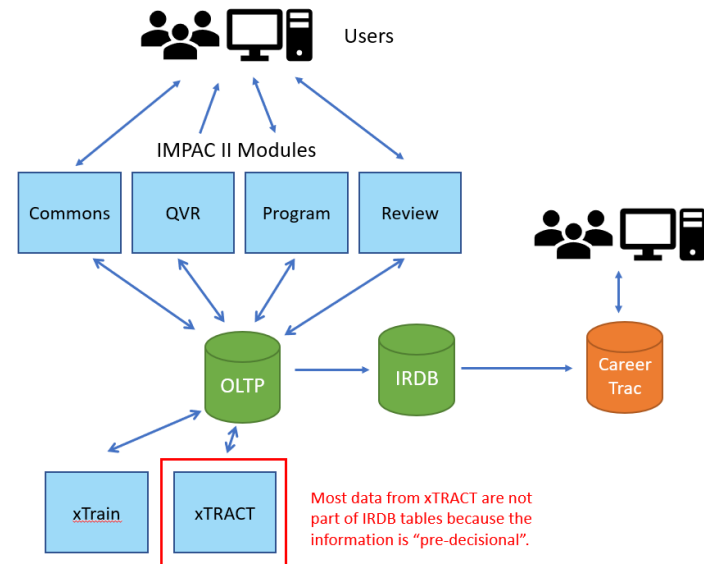
## Training Experience Count by Tenant (N=34,332)





# NIH Data Systems

- IMPAC II is the main database that houses all grant-related information
  - Comprised of many “modules,”
    - Ex: Commons, Review, Program, xTRAIN, etc
- CareerTrac draws information from IMPAC II and encourages PIs to add long term outcome data for trainees
- All trainees and mentors have/require “CommonsID”
- Some tenants load data from xTRAIN; others use CT to appoint trainees





## OMB Clearance

- CareerTrac currently has OMB clearance through April 30, 2021:

OMB ACTION: Approved without change

OMB CONTROL NUMBER: 0925-0568

The agency is required to display the OMB Control Number and inform respondents of its legal significance in accordance with 5 CFR 1320.5(b).

EXPIRATION DATE: 04/30/2021

DISCONTINUE DATE:

- OMB Clearance sought for the following:
  - Addition of new programs (e.g., R25, F, & K grants for various tenants)
  - Single Sign-on/Trainee Interface
  - Updating Number of Respondents/tenant, Avg. time/response, Annual Hour Burden
  - Annualized Cost to Respondents
  - Expansion of previously approved fields
  - Addition of new fields to the data entry screens

# What Information Does CareerTrac Collect?

## CareerTrac Outcome Measures


- Research Project Title
- Field of Training
  - NIH defined training fields
- Scientific & Technical Emphasis
  - Similar to Field of Training, more specific (pick up to 6)
- Career Highlight (narrative)
- Posters
- Honors/Awards
- Publications
  - Top Ten Journals
- Later NIH Grants
- Students
- Policies & Products
- Education
  - Pre-, In-, and Post-training
- Employment Data
  - Position Title
  - Organization
  - Sector
    - Academia, Government, Industry, Not for profit, other
  - Major emphasis
    - Administration, Clinical, Policy, Research, Teaching, Other
  - Tenure Track
    - Yes/no
  - Post-doc
    - Yes/no
- Program Info (NCI/CRCHD only)


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# Login Page (<https://careertrac.niehs.nih.gov/auth/login>) \*change to Login Page expected in 2020


National Institute of Environmental Health Sciences


Tracking Trainees to Success



Login
About

Please sign in with your CareerTrac username and password

Username

Password

Sign In

[Forgot Your Password?](#)  
[Need a CareerTrac User ID?](#)

## Password Reset Request

Enter your username below and we'll send you an email with a link to reset your password.  
You will be required to change the password before being able to log into the system.

Username

Submit

Login
About

### CareerTrac Access

If you require access to CareerTrac and you are a:

Principal Investigator

Program Officer

Principal Investigator Administrator

To obtain a CareerTrac login, please fill out the following form:

First Name: \*

Last Name: \*

Email Address: \*

Institute: \*

Principal Investigator(s): \*

Grant(s): \*

Message(Optional):

Request Access

All other NIH staff and contractors

For further information regarding access, please refer to the [CareerTrac Access SOP](#). If you have additional questions, please email [CareerTrac@mail.nih.gov](mailto:CareerTrac@mail.nih.gov).



# Landing Page: Trainees Tab

Main navigation →

Search Tool

Trainee Details

Page navigation →

[Trainees](#)
[Dashboard](#)
[Reports ▾](#)
[Admin ▾](#)
[Help ▾](#)

Logged in as  | [Change Password](#) | [Logout](#)

## NIEHS Trainee List

Last Name

Grant

ES

Institution

PI

Training Start Date

Before ▾

View All ▾

Training End Date

Before ▾

View All ▾

Training Status ?

View All ▾

Active Grants Only

No ▾

PCC ?

View All ▾

CT Status ?

Active ▾

Email

 Showing 1 - 10 of 6,964 Trainees
 

⏪ ⏩ ⏴ ⏵

 Go to page: 

Results per page:

# Entering Trainee Data – In-Training Experience

Example of data collected in the NIEHS Tenant



**Trainee Menu**

Contact Info

Pre-Training Info

**In-Training Experience**

Accomplishments

Comments

CareerTrac Status

Other Training Appointments

[Back to Trainees](#)

**In-Training Information**

**Trainee's Research Project Title**

3950 characters remaining

**ORCID ID** [?](#)

0000-0000-0000-0000

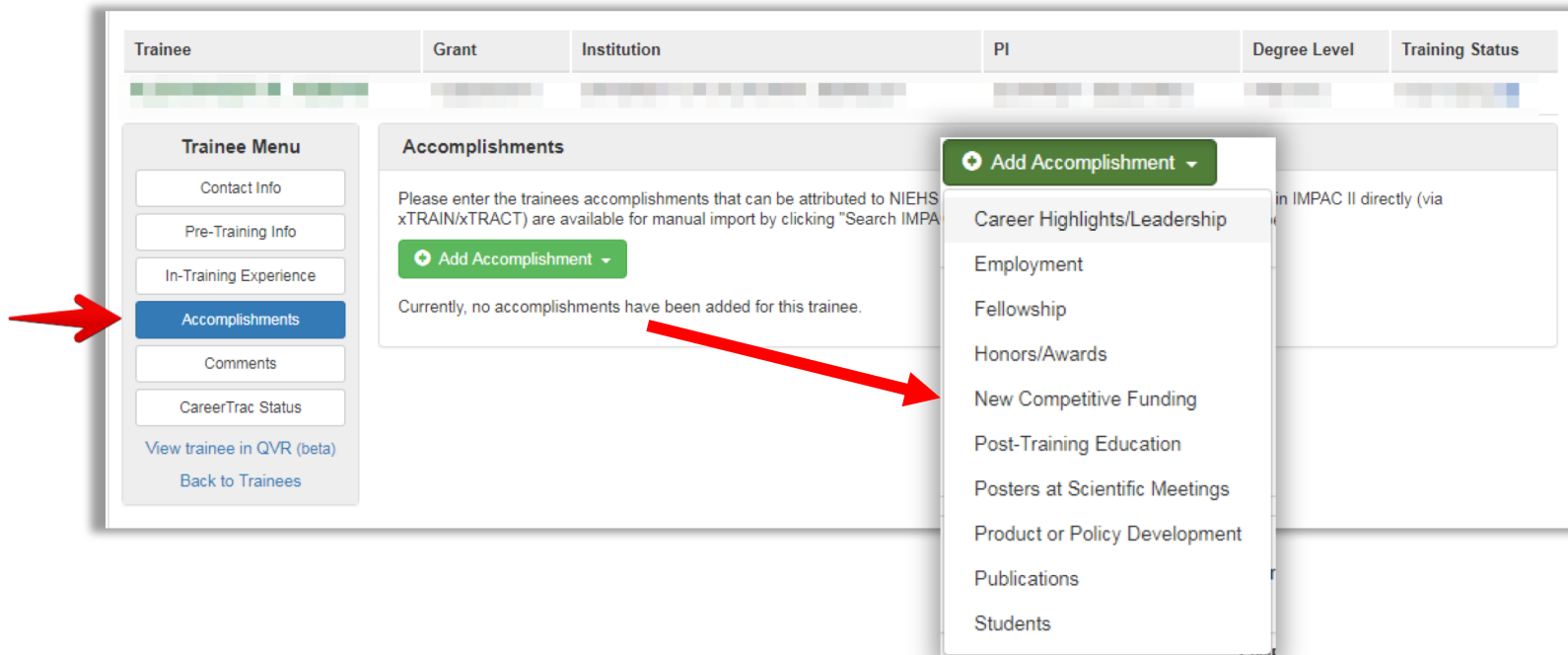
**Scientific Technical Emphases**

[+ Add Emphases](#)

No emphases entered

# Entering Trainee Data – Accomplishments

Example of trainee accomplishments collected in CareerTrac:



The screenshot displays the CareerTrac interface for entering trainee data. At the top, there are tabs for Trainee, Grant, Institution, PI, Degree Level, and Training Status. Below these, a 'Trainee Menu' on the left contains buttons for Contact Info, Pre-Training Info, In-Training Experience, Accomplishments (highlighted with a red arrow), Comments, CareerTrac Status, and a link to View trainee in QVR (beta). The main 'Accomplishments' section contains a green 'Add Accomplishment' button (also highlighted with a red arrow) and a message stating 'Currently, no accomplishments have been added for this trainee.' A dropdown menu is open from the 'Add Accomplishment' button, listing various categories: Career Highlights/Leadership, Employment, Fellowship, Honors/Awards, New Competitive Funding, Post-Training Education, Posters at Scientific Meetings, Product or Policy Development, Publications, and Students.





# Entering Trainee Data – Employment (Accomplishment)

Create Employment Accomplishment

New employments that were entered in IMPAC II d  
for import by clicking "Search IMPAC II"

Search IMPAC II

Name

Commons ID

Search IMPAC II

Manually Enter an Employment

Continue

Create Employment Accomplishment

	Job Title	Start Year	Employer
<div>+</div> Add	Adjunct Professor	2013	
<div>+</div> Add	Postdoctoral Fellow	2012	

Training status while employed in this position ? \*

Select a training status...

Employment Year Began \*

Select the start year...

Employment Year End

Select the end year...

Job Title \*

Country of Employment

Select a country...

Region

n/a

Employer ?

Select a country first...

Employment Sector ? \*

Select a sector...

What is the major emphasis of this position? \*

Select an emphasis...

Is this a post-doc position? \*

☐ Yes
 ☐ No

Which of the following best describes the tenure status of this position? \*

Select a tenure status...

If applicable, please select a topic area for this position

Not Applicable

Activity Classification \*

Select an activity classification

CareerTrac pulls data from other sources like  
IMPAC II and PubMed

# Entering Trainee Data – Publications (Accomplishment)

Create Publication Accomplishment

Search PubMed by Author

First Name

D

Last Name

C

Article Title

Search by Name

Search PubMed by PMID or PMCID

ID

Search by ID

Manually Enter an Publication

Continue

Create Publication Accomplishment

Matching publications: 12

	Publication Title	Journal Name	Authors	Pub Date
<div>➕ Add</div> <div>➖ Ignore</div>	Expanding the Concept of Translational Research: Making a Place for Environmental Health Sciences.	Environmental health perspectives		2018 Jul
<div>➕ Add</div> <div>➖ Ignore</div>	The National Institute of Environmental Health Sciences Superfund Research Program: a model for multidisciplinary training of the next generation of environmental health scientists.	Reviews on environmental health		2018 Mar 28
<div>➕ Add</div> <div>➖ Ignore</div>	Automated Research Impact Assessment: A New Bibliometrics Approach.	Scientometrics		2016 Mar
<div>➕ Add</div> <div>➖ Ignore</div>	Evaluating community and campus environmental public health programs.	Progress in community health partnerships : research, education, and action		2014 Summer
<div>➕ Add</div> <div>➖ Ignore</div>	Greatest 'HITS': A new tool for tracking impacts at the National Institute of Environmental Health Sciences.	Research Evaluation		2013 Dec
<div>➕ Add</div> <div>➖ Ignore</div>	Measuring partnership activities: partnerships in environmental public health evaluation metrics manual.	Environmental health perspectives		2012 Jul

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# Generating Reports

Once data has been stored, it only takes a few clicks to generate many reports.

For PIs: Most reports are specific to one grant. Some contain aggregate data for comparison.

For NIH Staff: View data across programs

In Training ▶

Mentor Report  
Trainee Roster  
In-Training Information

Education ▶

Prior Academic Degrees  
Number of PreDocs Who Completed a Doctoral Level Degree  
T32 Post-Doc to T32 Post-Doc  
Time to Degree for Pre-Docs  
PreDoc/PostDoc Prior Institutions  
In-Training Education

Accomplishments ▶

Career Highlights/Leadership  
Employment ▶  
Fellowship  
Honors/Awards  
New Competitive Funding  
Post-Training Education  
Posters at Scientific Meetings  
Product or Policy Development  
Publications ▶  
Students

Employments By Sector  
Most Recent Employment By Sector Comparison  
Most Recent Employment By Emphasis  
Most Recent Employment By Emphasis Comparison  
Most Recent Employment on a Tenure Track  
Employment By Tenure Status Comparison  
Previous Position  
Tenure Status Summary Report

Publications ▶

Publications  
Top Journals  
Number of Publications per Trainee: Grantee to Tenant Comparison



# Generating Reports – notable reports

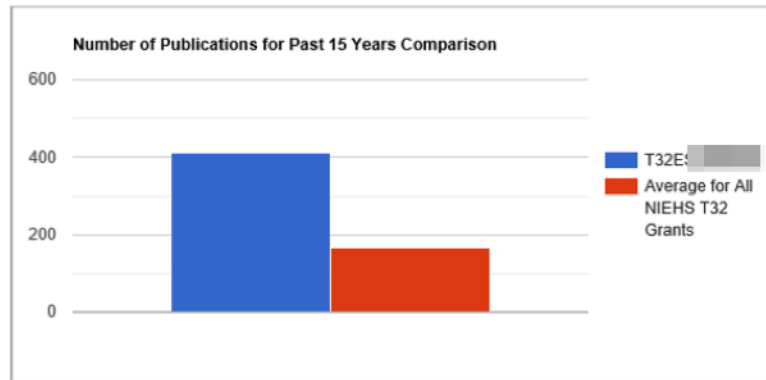
- **CT Database Export** (Administrative reports)
  - This report **prints all data** for your trainees.
  - Includes Contact Info, Pre- and In-Training data, Accomplishments, and Comments
- **Mentor Report** (In-Training reports)
  - Prints all stored mentors for your trainees
  - If a trainee has multiple mentors, they are displayed on separate rows
- **In-Training Info** (In-Training reports)
  - Prints all data from the In-Training Experience section, except Degrees
  - Also includes Mentors
- **In-Training Education** (Education reports)
  - Prints all trainees' education data (Degrees) from the In-Training section of the trainee record
  - Like mentors, multiple degrees are displayed on separate rows

# Example of the Dashboard reports in the NIEHS Tenant

## Dashboard

PI

Grant



T32E

Number of publications = 412

\* Grant is 37 year(s) old

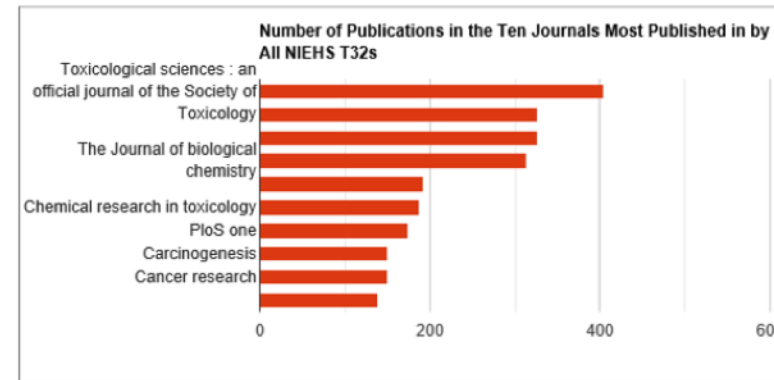
**All NIEHS T32s**

Average Number of publications = 167

\* Only grants with publication data have been included

\* Average age of a T32 grant is 34 years

[Save Chart as an Image](#)



**All NIEHS T32 Grants**

\*Top Ten Journals data gathered from publication data in CareerTrac over the past 15 years

[Save Chart as an Image](#)

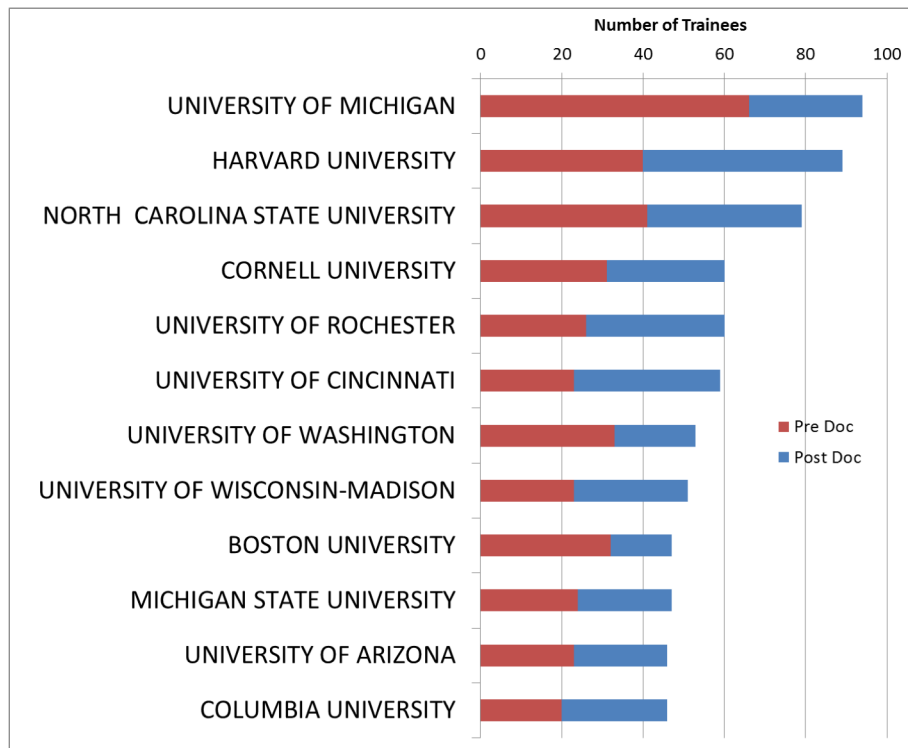
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# Trainees come to us from a variety of Institutions

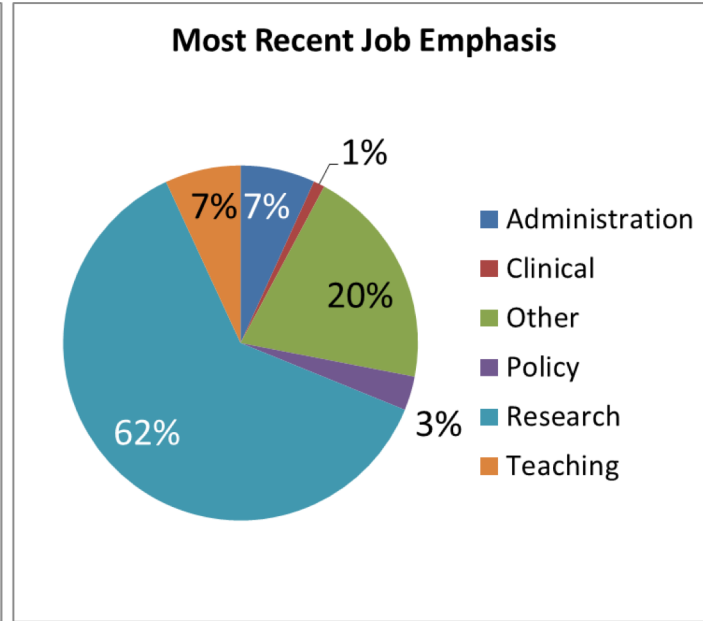
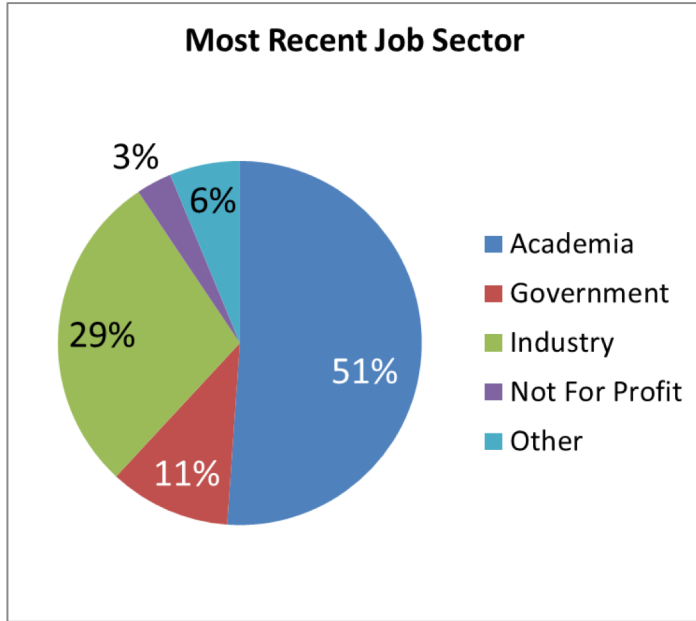
- The top 12 institutions represent <10% of the degrees reported
- 1145 Institutions linked to trainees
- PREDOC and POSTDOC pipelines are not the same

- All Trainees 1975-2015
- N= 2,801; 3,334 had no data





# Employment: Most Recent Job



- All Trainees 1975-2015
- N= 1168; 4967 had no data

## NIEHS Institutional Training Grant Summary Report (2001–2015)

The National Institute of Environmental Health Sciences (NIEHS) supports a diverse range of training programs to support the environmental health science workforce. A core foundation for these efforts is the Ruth L. Kirschstein National Research Service Award (NRSA) Institutional Training Grant Program, often referred to as the T32 program. This report summarizes the outcomes of trainees supported through the program between 2001–2015.

### NIEHS T32 Program Overview

The goal of the Institutional Training Grant Program is to prepare qualified trainees for careers that have a significant impact on the health-related research needs of the nation. A T32 grant enables colleges, universities, and other research-based institutions to recruit and select individuals for predoctoral and postdoctoral research training.

### Why Track Trainees?

Training is a critical component of NIEHS strategic plan Theme 3: Enhancing Environmental Health Science Through Stewardship and Support. T32 grantees track their trainees for 15 years after the first appointment to better assess trainee outcomes and impacts during and after their training.

NIEHS leads this innovative trainee outcome tracking project with other National Institutes of Health (NIH) partners through the use of CareerTrac.

### Scope of This Report

This report summarizes data entered by T32 principal investigators (PIs) into the CareerTrac database. A major CareerTrac data collection effort was completed in 2016, so the statistics reported here range from 2001 to 2015. The hope is that the data presented here inspires T32 PIs to continue adding data to CareerTrac.

### The Program by the Numbers

#### Trained:

**6,498 Trainees**

- 4,233 Predoctoral
- 2,265 Postdoctoral

#### Supported:

**92 Grants**

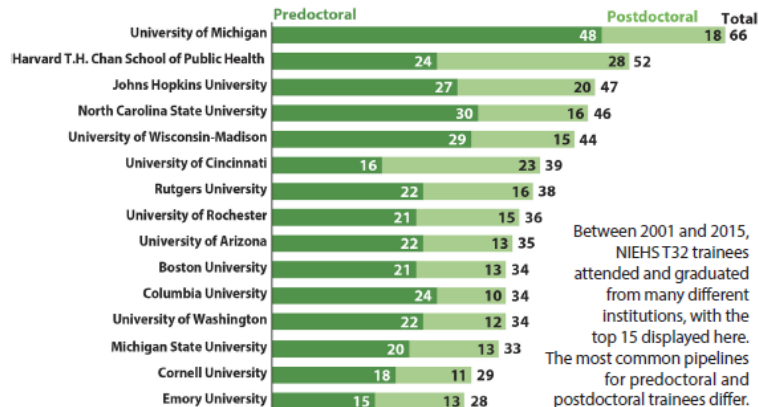
#### Occurred in:

**65 Institutions**  
**20 States**

**Average number of years an  
NIEHS T32 grant is funded:  
24.5 Years**



## NIEHS T32 Trainee Background: 2001–2015



Between 2001 and 2015, NIEHS T32 trainees attended and graduated from many different institutions, with the top 15 displayed here. The most common pipelines for predoctoral and postdoctoral trainees differ.

## NIEHS T32 Trainees: 2001–2015

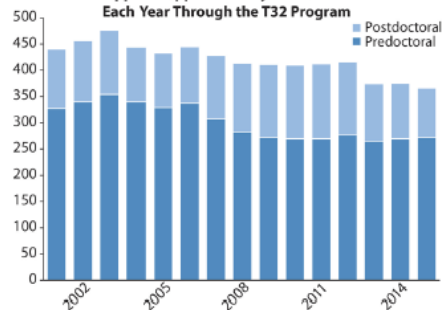
From 2001 to 2015, the NIEHS T32 program has supported an average of:

- 122 new predoctoral trainees per year
- 59 new postdoctoral trainees per year

### Number of Trainees, 2001–2015

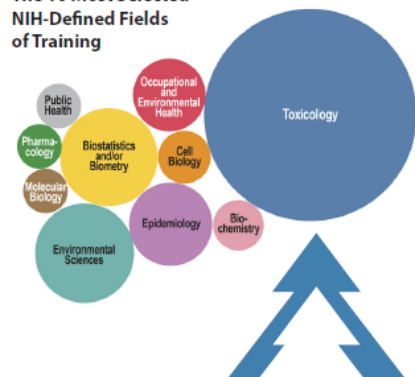
- Predoctoral: 1,873
- Postdoctoral: 914
- Total: 2,787

NIEHS Supports Approximately 365 to 475 Trainees Each Year Through the T32 Program



## Trainee Disciplines

### The 10 Most Selected NIH-Defined Fields of Training

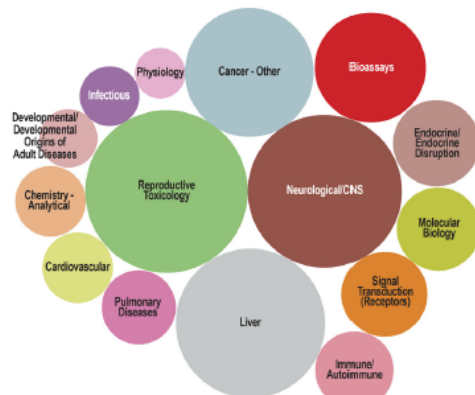


### Broad NIH-Defined Fields of Training

NIH defines about 80 major fields of training to cover all topics supported across all 27 Institutes and Centers. Toxicology is by far the most dominant field of training for NIEHS T32 trainees, representing 32 to 49 percent of NIH-selected fields each year between 2001 and 2015. Other fields of study rise and fall over time. On average, 75 percent of trainees are captured by just 10 of the 80 NIH major fields of training.

### Detailed CareerTrac-Defined Scientific and Technical Emphases

In addition to the NIH-defined fields of training, CareerTrac collects up to six scientific and technical emphases per trainee. These are tailored to environmental health science topics and allow for a much more detailed understanding of topics being addressed.



The figure to the left shows that trainees who selected toxicology as their NIH field of training are actually studying a wide range of topics, approaches, and outcomes.

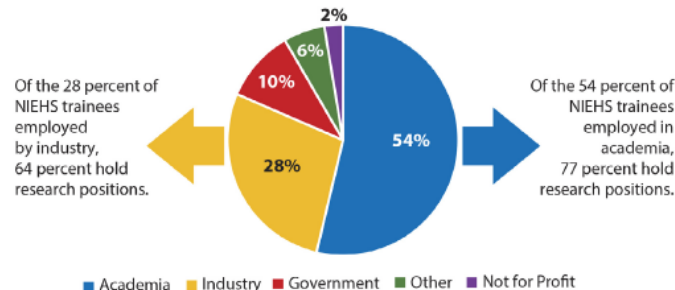
Greater detail and specificity to environmental health science also enables training program staff to track emerging science topics, such as data science or the microbiome.

## After Training: Employment

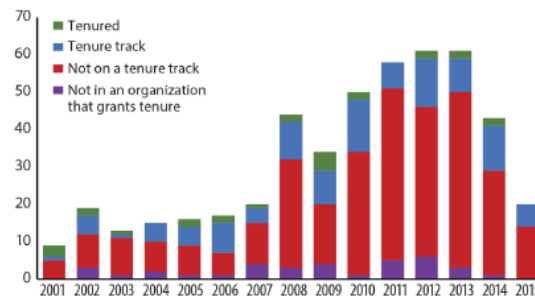
Trainees obtain jobs in all different employment sectors and emphases, though most trainees are employed in academia and industry, with an emphasis on research.\*

*\* CareerTrac is the only system that collects detailed employment data.*

### Careers in Academia and Industry Dominate the Employment Sector for T32 Trainees



The proportion of academic jobs reported with tenure or as tenure track has decreased, while the proportion of academic jobs not on a tenure track has increased.



NOTE: Data on this page are from approximately 50% of the trainees (1,373 out of 2,787) supported by an NIEHS T32 grant between 2001 and 2015.

## Connections

### Opportunities Prior to the T32 Program

T32 trainees have experiences with other NIH training and fellowship programs prior to entering the T32 program, such as the R25 Summer Research Experience and R25 Undergraduate Research programs.

#### Goals of the R25 program include:

- Helping attract young students to careers in science.
- Providing opportunities for undergraduate students to gain valuable research experience.
- Helping prepare participants for graduate school.

### Opportunities After the T32 Program

#### ONES (Outstanding New Environmental Scientist) Award:

ONES Awards are early-stage career grants awarded to scientists, often tenured faculty, conducting cutting-edge research on the health effects resulting from exposure to environmental contaminants, such as arsenic, air pollution, industrial chemicals, and pesticides.

Several R25 programs are located at universities with T32 programs.

#### ONES Awardees

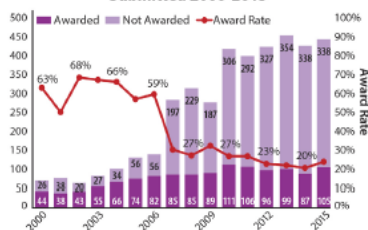
Total number of awardees: **63**

**18 (29 percent)** were T32 trainees

Average number of years from first T32 appointment to ONES Award: **9.5 years**

### Alumni of the T32 Program Apply for NIH Grants and Receive Awards From Many NIH Institutes

#### Award Status of Applications Submitted 2000-2015



#### Institutes Funding Grants Awarded to T32 Alumni 2000-2015



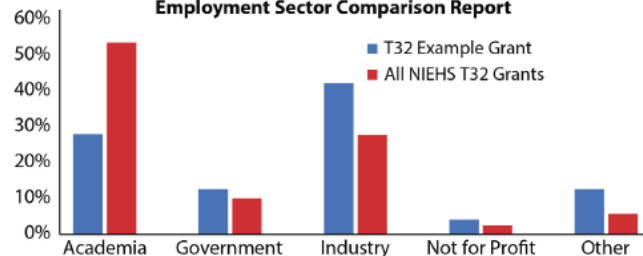
## CareerTrac Data on Display

CareerTrac generates many reports so that NIEHS T32-funded researchers can see data on their trainees and compare them to the aggregate of all NIEHS T32 trainees with data in CareerTrac.

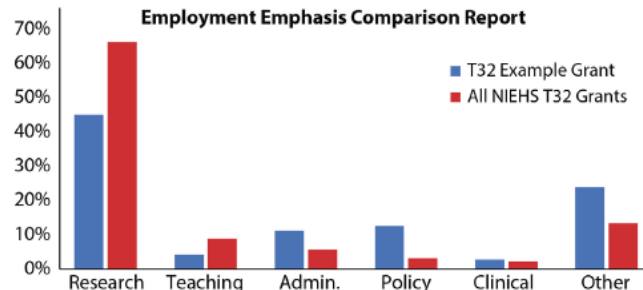
### Comparison Reports

CareerTrac generates reports that compare the employment sector and emphasis between one grant and all NIEHS T32 grants.

#### Employment Sector Comparison Report



#### Employment Emphasis Comparison Report

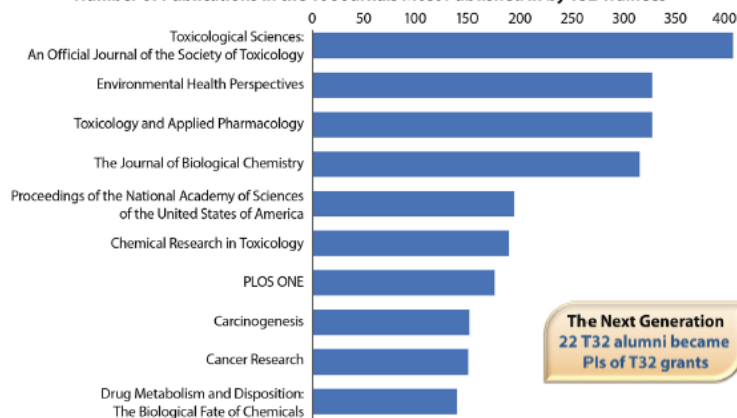


## CareerTrac Data on Display

### Publications

- 11,420: Total number of trainee publications in CareerTrac
- 1.77: Average number of publications per trainee

Number of Publications in the 10 Journals Most Published in by T32 Trainees



**The Next Generation**  
22 T32 alumni became  
PIs of T32 grants

Types of Products or Policies  
Recorded for Trainees



**Products and Policies**  
49 Recorded, including 25 patents

## CareerTrac Data Collection

The CareerTrac database allows for the measurement of long-term trainee outcomes by collecting data on a variety of measures. The data is used by NIEHS grantees in reports and renewals, and to track their trainees over time, and by NIEHS to track trends in trainees' fields of training, employment, publications, and more.

### CareerTrac collects the data in the following fields:

- Research Project Title
- Field of Training (NIH-defined)
- Scientific and Technical Emphasis (NIEHS-defined)
- Career Highlight (narrative)
- Posters
- Honors
- Publications
- Later NIH Grants
- Students
- Policies and Products
- Employment Data
  - Position Title
  - Organization
  - Sector
    - Academia, Government, Industry, Not for Profit, Other
  - Major Emphasis
    - Administration, Clinical, Policy, Research, Teaching, Other
  - Tenure Track
  - Postdoc

*"CareerTrac has been an effective tool to understand the past, present, and future of our training programs. We know more about where our trainees come from, their work during training, and where they go after they leave our programs. We see the value in long-term outcome data. It helps us think about how to further shape and improve our training programs. We very much appreciate the data PIs enter in CareerTrac and encourage updating it regularly."*

Gwen Collman, Director, Division of Extramural Research and Training

This report provides an overview of the many accomplishments of the NIEHS NRSA T32 program for the past 15 years. Unless otherwise stated, figures represent data from 2001 to 2015.

We look forward to your comments and feedback. For more information, contact Carol Shreffler, Ph.D., at [shreffl1@niehs.nih.gov](mailto:shreffl1@niehs.nih.gov) or 984-287-3322



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# CareerTrac Partnership History

- 2003-06:** FIC initially created CT based on existing MS Excel database
- 2008:** NIEHS joins effort; adds IMPAC II to data model
- 2011:** Joint launch of combined system on NIEHS servers
- 2012:** NLM Pilot Project
- 2013:** NIGMS Pilot Project Begins
- 2015:** CRCHD Pilot Project Begins
- 2016:** NIGMS Expansion
- 2017:** Added NIGMS, CRCHD, & SRP to MOU



# CT Governance

- Maintenance
  - 5 tenants contribute equally to annual maintenance costs
- Projects
  - Custom and Joint development
- OMB clearance considerations
- Making work requests





# What is Maintenance?

- Security
  - Meeting NIH requirements
  - Responses to security scans, vulnerabilities, etc.
- Application and Database Maintenance
  - Framework and DB (*java upgrades, web server upgrades, etc., browser compatibility*)
  - Documentation (*help files, OMB clearance, FAQs, SOPs for all operations, matrix mgmt*)
- User Support
  - Account and Access management
  - Data Quality (*duplicate records, menu values, etc.*)

# Memoranda of Understanding

- Currently between NIEHS, FIC, CRCHD, NIGMS, & SRP (signed 2017)
- Formal partnership agreement to host production data
- Signed by IC business owner (Div Director) and Executive Officer.
- Automatically renews each FY until one party changes
  - 6 months notification needed for dissolution
- New partners can be added as needed

Questions?

Contact [CareerTrac@mail.nih.gov](mailto:CareerTrac@mail.nih.gov)



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